

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Specialty Bar Products Co.

South Carolina Manufacturing Extension Partnership

Specialty Bar Products Gets Lean and Competitive to Reach New Markets

Client Profile:

Specialty Bar Products Co., founded in 1945, is a custom manufacturer of turbine and compressor rotor studs for gas turbines, as well as forged and machined components for a variety of industries, including aerospace, power generation, recreational firearms and marine propulsion. The company employs 80 people at its facility in Greenville, South Carolina.

Situation:

Specialty Bar Products is General Electric's primary domestic supplier of hi-nickel alloy or stainless steel internal bolts, studs and nuts for turbines and compressors. Fluctuations in the gas turbine market have produced some big variances in annual sales figures over the past several years, and sales dropped more than 50 percent. Specialty Bar Products started manufacturing receivers for FN Manufacturing, a firearms producer located in Columbia, South Carolina. In preparation for this market expansion, the company contacted the South Carolina Manufacturing Extension Partnership (SCMEP), a NIST MEP network affiliate, for assistance.

Solution:

SCMEP met with Specialty Bar Products' General Manager, Tim Jackson, and other members of the Specialty Bar team for a Competitiveness Review. This assessment provides information on how well they were meeting benchmarks for optimal manufacturing operation. After this review, SCMEP made strategic and tactical recommendations to improve operations at the Greenville facility. One step recommended by SCMEP was the implementation of Lean Manufacturing Principles to help Specialty Bar Products achieve several long-term goals, including: 1) building a more diversified client base while maintaining the gas turbine business but also becoming a supplier to the oil and steam turbine sectors.; 2) improving the changeover process that cost \$150,000 in time lost; 3) implementing Lean methodology so that existing and new products can be produced more effectively; 4) improving throughput and reducing lead time; and 5) increasing plant capacity to deal with work from new and existing customers.

SCMEP designed a program to address these concerns, setting up training programs for Lean 101, Value Stream Mapping, 5S Kaizen events and SME Bronze level certification classes. The training programs and Kaizen events began, and opportunities to reduce lead time became a high priority. Implementation of Lean methodology resulted in elimination of the centralized tool crib that was costing Specialty Bar time and money as workers frequently left the work site to retrieve or return a tool. Now all tools are put at point-of-use to get the job done efficiently and quickly. Other opportunities to enhance competitiveness included improving inventory turns and work-in-process levels as well as increasing capacity.

Results:

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- * Reduced walking time from 100 feet to 3 feet to complete set-up, a reduction of 97 percent.
- * Reduced changeover time by 40 percent.
- * Decreased set-up time by 80 percent.
- * Increased shop floor capacity by 30 percent.

Testimonial:

"Working with the South Carolina Manufacturing Extension Partnership allowed us the opportunity to implement some obvious changes and new production techniques, leading to a stronger operation. The Lean initiative brought a high level of improvement and better efficiencies; involving the entire operation resulted in an explosion of new ideas and motivation for individual self-improvement by helping everyone understand how their every action affects the operation, their own success and our bottom-line. Our entire plant is better positioned to respond to our customer diversification, enabling us to service both new and existing customers more effectively."

Timothy Jackson, General Manager